Remarks:

Applicant respectfully requests reconsideration of the Office action dated March 22, 2005 In view of the foregoing amendments and the following remarks. Prior to entry of the present Amendment, claims 1-41 are pending in the application. Claims 10 and 11 stand rejected under 35 U.S.C. § 112, second paragraph. Claims 1-41 stand rejected under 35 U.S.C. § 102(b).

Rejection under 35 U.S.C. § 112

Claim 10 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 has been amended to depend from claim 8 instead of claim 7. Accordingly, applicant requests withdrawal of the rejection based on 35 U.S.C. § 112.

Rejections under 35 U.S.C. § 102

Claims 1-41 stand rejected under 35 U.S.C. § 102(b) or 102(e) as being anticipated by either U.S. Patent No. 4,305,158 to Thundat et al. (hereinafter Thundat) or U.S. Patent No. 4,305,158 to Auner et al. (hereinafter Auner). Applicant respectfully traverses this rejection.

With respect to claim 1, both Thundat and Auner fail to teach each element recited in claim 1. For example, claim 1 recites "accelerating the transducer to induce bond breakage." The Examiner states that Thundat discloses "accelerating the transducer to induce bond breakage," but does indicate where Thundat teaches such subject matter. Instead, the Examiner refers generally to column 3, line 40 to column 8 line 45 of Thundat. Applicant contends that the cited portion of Thundat does not show, teach, or suggest accelerating a transducer to induce bond

breakage. Thundat does discuss reversible sorption of a sample material on column 5, lines 7-8, but Thundat completely fails to address inducing bond breakage by accelerating a transducer or by any other means.

The Examiner suggests that Auner teaches the subject matter of claim 1 in column 5, line 62 to column 7, line 23 and column 12, line 56 to column 13, line 44. However, the Examiner does not specify where Auner teaches "accelerating the transducer to induce bond breakage." Auner discloses that "interaction by an analyte 103b containing target molecules or structures binds to the immobilization layer 104b so as to change a resonant frequency of the acoustic wave resonator arrangement 101b." While Auner discusses binding a sample material to an immobilization layer, the cited portion of Auner does not discuss breaking the bond between the sample material and the immobilization layer. Therefore, Auner fails to show, teach or suggest "accelerating the transducer to induce bond breakage" (emphasis added), as recited in claim 1.

Applicant further submits that both Auner and Thundat fail to teach a "drive signal including a waveform having multiple frequency components that are pre-selected based on expected resonance behavior of the transducer," as recited in claim 1. The Examiner states that both Auner and Thundat teach this subject matter of claim 1, but does not provide a specific indication of where the references disclose the subject matter. Applicant is unable to find anywhere, within the cited portions of the references, where Auner and Thundat show, teach or suggest "drive signal including a waveform having multiple frequency components that are pre-selected based on expected resonance behavior of the transducer."

Accordingly, applicant submits that claim 1 clearly distinguishes over Auner and Thundat. Applicant therefore submits that independent claim 1, as well as claims 2-19, which depend from claim 1, are allowable for at least the foregoing reasons. Thus, applicant requests withdrawal of the rejections based on 35 U.S.C. § 102(b) and 102(e) and submits that claims 1-19 are in condition for allowance.

Turning now to claim 20, which recites a "screening each of the output responses for rupture indicators suggestive of a potential rupture event," a feature nowhere disclosed or suggested by Thundat or Auner. Claim 20 also recites "mechanically exciting the transducer at different energy levels." The Examiner does not directly address these features of claim 21. Applicant submits that the cited portions of Thundat and Auner do not disclose exciting a transducer at different energy levels or screening each of the output responses for rupture indicators.

Accordingly, applicant submits that claim 20 clearly distinguishes over Auner and Thundat. Applicant therefore submits that independent claim 20, as well as claims 21-24, which depend from claim 20, are allowable for at least the foregoing reasons. Thus, applicant requests withdrawal of the rejections based on 35 U.S.C. § 102(b) and 102(e) and submits that claims 20-24 are in condition for allowance.

Applicant also submits that the foregoing arguments with respect to the allowability of claim 1 apply generally with equal force to claims 25 and 41. Accordingly, applicant submits that claims 25 and 41 clearly distinguish over Auner and Thundat. Applicant therefore submits that independent claims 25 and 41, as well as claims 26-40, which depend from claim 25, are allowable for at least the foregoing reasons. Thus, applicant requests withdrawal of the rejections based on

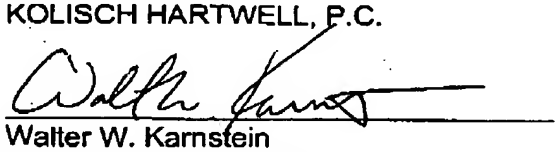
35 U.S.C. § 102(b) and 102(e) and submits that claims 25-41 are in condition for allowance.

Conclusion:

Applicant believes that this application is now in condition for allowance, in view of the above amendments and remarks. Accordingly, applicant respectfully requests that the Examiner issue a Notice of Allowability covering the pending claims. If the Examiner has any questions, or if a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record.

Respectfully submitted,

KOLISCH HARTWELL, P.C.



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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to Examiner H. Kwok, Group Art Unit 2856, Assistant Commissioner for Patents, at facsimile number (703) 872-9306 on June 22, 2005.

Christie A. Doolittle